THE SANITARY PRIVY

or

(How to Keep a Biffy Spiffy)

A sanitary privy can serve as a convenient and practical sewage disposal device and not pollute or contaminate any of our ground surface waters. However, an improperly constructed and maintained privy can be an abomination to both eyes and nose.

Several methods can be used to minimize the sanitary privy odor problem caused by decomposition of the organic matter in the pit. Chemical additives can change the bacterial action so that less odors are generated. Both the pit and the upper part of the structure must be vented. There should be tight fitting covers on the seat openings. Finally, the inside of the structure should be painted with a polyurethane-type paint so as to minimize the penetration of odors into the wood.

A number of products are on the market which claim to minimize odors in a sanitary privy. A product which has shown a reasonable degree of effectiveness is hydrated lime. Associated compounds containing the same chemical are slaked lime, quick lime, chloride of lime and pebbled lime.

Hydrated lime added in amounts of approximately one cup sprinkled over the solids in the pit will tend to minimize odors and also aid in decomposition. As the odors again become objectionable another cup of lime should be added. Excess amounts of hydrated lime will tend to retard decomposition rather than promote it, although the generation of odors will be inhibited. Caution should be used to keep the hydrated lime dust out of eyes and nostrils.

Commercial compounds are available and may be tried by the individual owner in order to determine their effectiveness. Some of them are odor suppressants while others change the bacterial environment.

To minimize the amount of odors which get into the upper part of the privy, vent the pit. Insect-proof openings should be placed in the walls below the set. A vent should extend from the underside of the seat board through the roof or up to a horizontal vent open to the sides of the toilet. All vent openings to the outside should be properly screened to keep out insects.

The vent must be flush with the underside of the seat board and must not extend down into the pit. Gases which cause odors are lighter than air and will collect under the seat board to be released upward into the privy when the seat cover is opened.

The opening in the seat board must have a tight fitting cover. The type of seat and cover used on a flush toilet is not satisfactory unless weather stripping is added. The cover should be kept in place when the privy is not in use. The cover can be hinged to close automatically when the privy is not in use.

At the top of the privy there should be a screened opening on each side or preferably all the way around the top of the privy in order to allow air to pass through and to carry away any odors which may seep into the upper part of the structure.

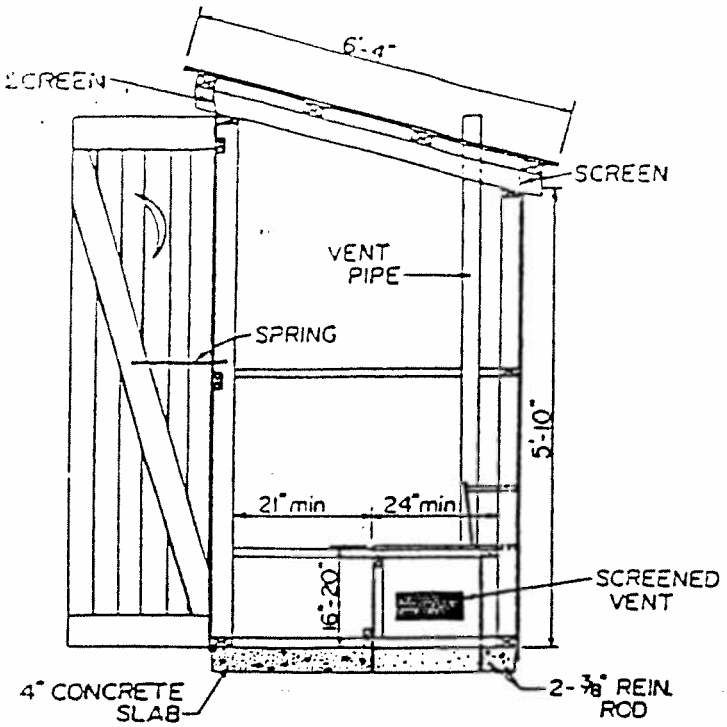
A tight fitting door, preferably with a self-closing feature such as a spring, should be used in order to minimize the number of insects that get into the privy. (A crescent-shaped window, also screened, may be cut into the door so that the utility of the structure will be recognized).

Those odors which in the past have risen into the structure of an old privy have likely become entrapped in the pores of the wood. To remove these odors make a solution of Lysol and Tri-sodium Phosphate (Soilax) and scrub the inside walls and all other inside surfaces of the privy. This solution will remove all odors from the pores of the wood. After the wood has dried, paint the inside of the privy with a polyurethane compound to prevent any additional odors from penetrating into the wood.

These techniques should minimize the amount of odor which will collect in the structure of a sanitary privy. Proper air circulation can be very helpful in carrying away any odors which might collect in the structure. Proper venting of the structure is absolutely essential.

Even though bacteria are decomposing the organic waste there will be some residue remaining. This residue will gradually build up until it must either be removed or the structure moved to a new location. Usually the solids can be removed by a septic tank pumper or someone with equipment to perform the task in a sanitary manner. The frequency of solids removal will depend upon the size of the pit and the amount of use.

If the pit has earth sides and bottom, the bottom should be at least 3 feet above the highest known level of the water table. If the pit is closer than 3 feet to the water table it should be a concrete tank with a watertight bottom. The privy should be securely attached to the ground or to the tank used for the pit.



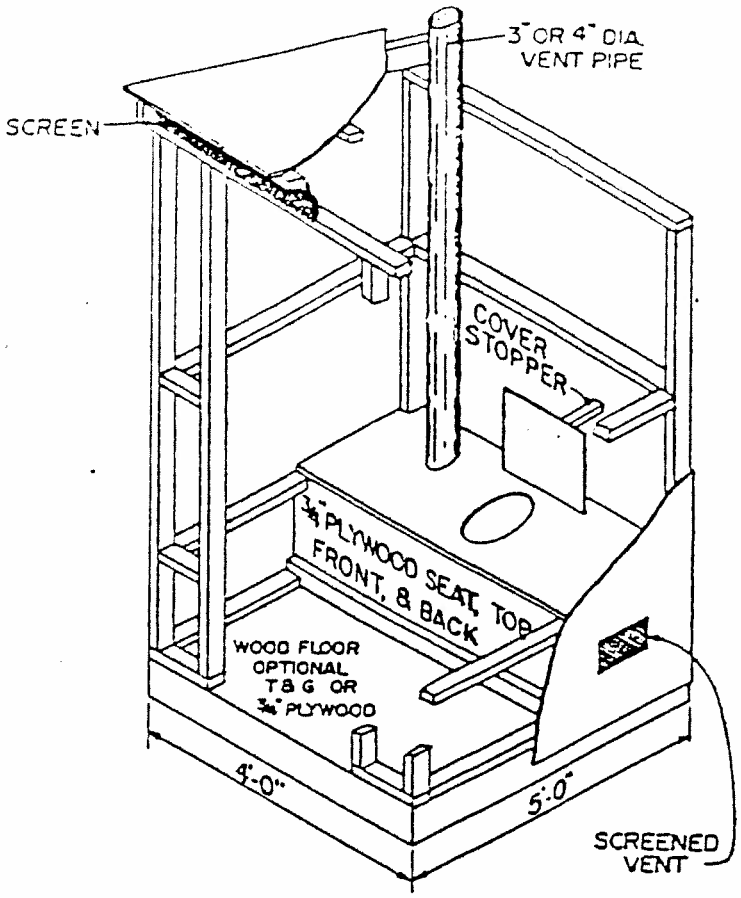
CONSTRUCTION NOTES

1. SIDES & DOOR CAN BE TONGUE & GROVE WOOD OR EXTERIOR PLYWOOD
2. DIMENSION LUMBER CAN BE 2"x3" OR 2"x4"
3. ROOF CAN BE ANY WATERTIGHT MATERIAL OF ADEQUATE STRENGTH

The sanitary privy shall be so located to provide the minimum horizontal distances between the privy and the following:

*Any water supply, well or unprotected water suction pipe.....	50 ft
Occupied buildings.....	20 ft
Property lines.....	10 ft
Buried pipe distributing water under pressure.....	10 ft

*If well is cased less than 50 feet in depth or does not encounter at least 10 feet of impervious material, this distance must be increased to 100 feet.



NOTES

1. The privy must be located at least 100 ft from any domestic water supply and set back from a lake as required by the Shoreland Standards (75 ft for a general development lake, 100 ft for a recreational development lake, and 200 ft for a natural environment lake).
2. The bottom of an open pit cannot legally be closer than 3 ft to water table or bedrock. A water-tight concrete tank can be installed into the water table if necessary.
3. The pit should have at least 27 cubic ft of storage capacity and be constructed of materials that do not deteriorate rapidly.
4. Vent the pit through the seat board with a flue of at least 7 sq. in. of area. Install the flue flush with the underside of the seat board and extend it at least 12 in. above roof level. Install vents to allow entrance of air into the pit.
5. Provide a screened vent near the top of the building to prevent trapped odors.
6. The privy should be insect-tight with a self-closing door (spring or counter weight). All vents should be covered with 16 mesh screen.
7. Hinge the seat cover in such a manner that it will fall shut. The seat cover should fit tightly over the seat opening to keep out pit odors.
8. Use polyurethane paint on all inside wood surfaces.